

Shigetaka SAKAKIBARA et al., Application No. 10/585,674
Page 5

Dkt. 2271/76516

Listing of Claims

The following listing of claims will replace all prior versions, and listings, of claims in the subject application:

1. (currently amended) An image processing method for performing an under color removal process and a black recording liquid incorporation process with respect to an input three-color signal, and generating image data for an ~~imaging~~ image forming apparatus that is configured to form a color image on a recording medium using at least a cyan (C) recording liquid, a magenta (M) recording liquid, a yellow (Y) recording liquid, and a black recording liquid, the method comprising the steps of:

regulating a maximum black recording liquid incorporation amount ~~such that~~ whereby glossiness of black realized in an image formed on a glossy recording medium is not substantially degraded,

the maximum black recording liquid incorporation amount being a black recording liquid incorporation amount that does not cause a glossiness of a recorded portion to become lower than a glossiness of a recording medium when recording is made with a patch of (R, G, B) = (0, 0, 0) input at maximum grayscale; and

~~setting the black to be realized by the black recording liquid until reaching the regulated maximum black recording liquid incorporation amount, and setting the black to be realized through addition of a composite of the cyan recording liquid, the magenta recording liquid, and the yellow recording liquid if the black to be realized requires an amount of the black recording liquid exceeding the regulated~~ causing to be performed, by the image forming apparatus, an image forming process including forming black only with the black recording liquid until the

Shigetaka SAKAKIBARA et al., Application No. 10/585,674
Page 6

Dkt. 2271/76516

maximum black recording liquid incorporation amount is reached and, when the maximum black recording liquid incorporation amount is reached, forming black with a combination of (i) a composite black using a mixture of the cyan recording liquid, the magenta recording liquid, and the yellow recording liquid and (ii) the black color in a same amount as the maximum black recording liquid incorporation amount.

2. (original) The image processing method as claimed in claim 1, wherein
the cyan recording liquid, the magenta recording liquid, the yellow recording liquid, and the black recording liquid contain pigment.

3. (original) The image processing method as claimed in claim 2, wherein
the maximum black recording liquid incorporation amount is regulated in the black recording liquid incorporation process according to characteristics of the recording medium, and is arranged to be greater than 0% and less than 52%.

Claim 4 (canceled).

5. (original) The image processing method as claimed in claim 3, wherein
an under color removal amount for the under color removal process is set to 100%.

6. (original) The image processing method as claimed in claim 3, wherein
an under color removal amount for the under color removal process is set to 100% until the under color removal amount reaches the regulated maximum black recording liquid

Shigetaka SAKAKIBARA et al., Application No. 10/585,674
Page 7

Dkt. 2271/76516

incorporation amount.

7. (currently amended) A printer driver ~~run on~~ stored in a non-transitory computer readable medium and embodying a program of instructions executable by a computer that is configured to perform an under color removal process and a black recording liquid incorporation process with respect to an input three-color signal, and generate image data for an ~~imaging~~ image forming apparatus that is configured to form a color image on a recording medium using at least a cyan recording liquid, a magenta recording liquid, a yellow recording liquid, and a black recording liquid, ~~which~~ said printer driver ~~[[is]]~~ being executed by the computer to perform the steps of:

regulating a maximum black recording liquid incorporation amount ~~such that~~ whereby glossiness of black realized in an image formed on a glossy recording medium is not substantially degraded,

the maximum black recording liquid incorporation amount being a black recording liquid incorporation amount that does not cause a glossiness of a recorded portion to become lower than a glossiness of a recording medium when recording is made with a patch of (R, G, B) = (0, 0, 0) input at maximum grayscale;

~~setting the black to be realized by the black recording liquid until reaching the regulated maximum black recording liquid incorporation amount, and setting the black to be realized through addition of a composite of the cyan recording liquid, the magenta recording liquid, and the yellow recording liquid if the black to be realized requires an amount of the black recording liquid exceeding the regulated~~ causing to be performed, by an image forming apparatus, an image forming process including forming black only with the black recording liquid until the

Shigetaka SAKAKIBARA et al., Application No. 10/585,674
Page 8

Dkt. 2271/76516

maximum black recording liquid incorporation amount is reached and, when the maximum black recording liquid incorporation amount is reached, forming black with a combination of (i) a composite black using a mixture of the cyan recording liquid, the magenta recording liquid, and the yellow recording liquid and (ii) the black color in a same amount as the maximum black recording liquid incorporation amount.

8. (currently amended) An ~~imaging~~ image forming apparatus that is configured to perform an under color removal process and a black recording liquid incorporation process with respect to an input three-color signal, and form a color image on a recording medium using at least a cyan recording liquid, a magenta recording liquid, a yellow recording liquid, and a black recording liquid, the apparatus comprising:

a processing unit that is configured to (a) regulate a maximum black recording liquid incorporation amount ~~such that~~ whereby glossiness of black realized in an image formed on a glossy recording medium is not substantially degraded, ~~set the black to be realized by the black recording medium until reaching the regulated maximum black recording liquid incorporation amount, and set the black to be realized through addition of a composite of the cyan recording liquid, the magenta recording liquid, and the yellow recording liquid if the black to be obtained requires an amount of the black recording liquid exceeding the regulated~~ the maximum black recording liquid incorporation amount being a black recording liquid incorporation amount that does not cause a glossiness of a recorded portion to become lower than a glossiness of a recording medium when recording is made with a patch of (R, G, B) = (0, 0, 0) input at maximum grayscale, and (b) cause to be performed, by the image forming apparatus, an image forming process including forming black only with the black recording liquid until the maximum

Shigetaka SAKAKIBARA et al., Application No. 10/585,674
Page 9

Dkt. 2271/76516

black recording liquid incorporation amount is reached and, when the maximum black recording liquid incorporation amount is reached, forming black with a combination of (i) a composite black using a mixture of the cyan recording liquid, the magenta recording liquid, and the yellow recording liquid and (ii) the black color in a same amount as the maximum black recording liquid incorporation amount.

9. (currently amended) The ~~imaging~~ image forming apparatus as claimed in claim 8, wherein

the cyan recording liquid, the magenta recording liquid, the yellow recording liquid, and the black recording liquid contain pigment.

10. (currently amended) The ~~imaging~~ image forming apparatus as claimed in claim 9, wherein

the maximum black recording liquid incorporation amount is regulated in the black recording liquid incorporation process according to characteristics of the recording medium, and is arranged to be greater than 0% and less than 52%.

Claim 11 (canceled).

12. (currently amended) The ~~imaging~~ image forming apparatus as claimed in claim 10, wherein

an under color removal amount for the under color removal process is set to 100%.

Shigetaka SAKAKIBARA et al., Application No. 10/585,674
Page 10

Dkt. 2271/76516

13. (currently amended) The ~~imaging~~ image forming apparatus as claimed in claim 10, wherein

an under color removal amount for the under color removal process is set to 100% until the under color removal amount reaches the regulated maximum black recording liquid incorporation amount.

14. (currently amended) An image processing apparatus that is configured to generate image data for an ~~imaging~~ image forming apparatus that forms a color image on a recording medium using at least a cyan recording liquid, a magenta recording liquid, a yellow recording liquid, and a black recording liquid, the apparatus comprising:

a printer driver stored in a non-transitory computer readable medium and embodying a program of instructions executable by the image processing apparatus ~~that is configured~~ to (a) perform an under color removal process and a black recording liquid incorporation process with respect to an input three-color signal, (b) regulate a maximum black recording liquid incorporation amount ~~such that~~ whereby glossiness of black realized in an image formed on a glossy recording medium is not substantially degraded, ~~set the black to be realized by the black recording liquid until reaching the regulated maximum black recording liquid incorporation amount, and set the black to be realized through addition of a composite of the cyan recording liquid, the magenta recording liquid, and the yellow recording liquid if the black to be obtained requires an amount of the black recording liquid exceeding the regulated~~ the maximum black recording liquid incorporation amount being a black recording liquid incorporation amount that does not cause a glossiness of a recorded portion to become lower than a glossiness of a recording medium when recording is made with a patch of (R, G, B) = (0, 0, 0) input at

Shigetaka SAKAKIBARA et al., Application No. 10/585,674
Page 11

Dkt. 2271/76516

maximum grayscale, and (c) cause to be performed, by the image forming apparatus, an image forming process including forming black only with the black recording liquid until the maximum black recording liquid incorporation amount is reached and, when the maximum black recording liquid incorporation amount is reached, forming black with a combination of (i) a composite black using a mixture of the cyan recording liquid, the magenta recording liquid, and the yellow recording liquid and (ii) the black color in a same amount as the maximum black recording liquid incorporation amount.

15. (currently amended) An imaging system, comprising:

an ~~imaging~~ image forming apparatus that is configured to form a color image on a recording medium using at least a cyan recording liquid, a magenta recording liquid, a yellow recording liquid, and a black recording liquid; and

an image processing apparatus that is configured to generate image data for the ~~imaging~~ image forming apparatus, which image processing apparatus includes a printer driver that is configured to (a) perform an under color removal process and a black recording liquid incorporation process with respect to an input three-color signal, (b) regulate a maximum black recording liquid incorporation amount ~~such that~~ whereby glossiness of black realized in an image formed on a glossy recording medium is not substantially degraded, ~~set the black to be realized by the black recording liquid until reaching the regulated maximum black recording liquid incorporation amount, and set the black to be realized through addition of a composite of the cyan recording liquid, the magenta recording liquid, and the yellow recording liquid if the black to be obtained requires an amount of the black recording liquid exceeding the regulated~~ the maximum black recording liquid incorporation amount being a black recording liquid

Shigetaka SAKAKIBARA et al., Application No. 10/585,674
Page 12

Dkt. 2271/76516

incorporation amount that does not cause a glossiness of a recorded portion to become lower than a glossiness of a recording medium when recording is made with a patch of (R, G, B) = (0, 0, 0) input at maximum grayscale, and (c) cause to be performed, by the image forming apparatus, an image forming process including forming black only with the black recording liquid until the maximum black recording liquid incorporation amount is reached and, when the maximum black recording liquid incorporation amount is reached, forming black with a combination of (i) a composite black using a mixture of the cyan recording liquid, the magenta recording liquid, and the yellow recording liquid and (ii) the black color in a same amount as the maximum black recording liquid incorporation amount.